

# UNITED STATES SIGNAL SERVICE

## MONTHLY WEATHER REVIEW.

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### 0 INTRODUCTION.

This REVIEW is based on reports for April, 1891, from 2,372 regular and voluntary observers. These reports are classified as follows: 171 reports from Signal Service stations; 118 reports from United States Army post surgeons; 1,524 monthly reports from state weather service and voluntary observers; 33 reports from Canadian stations; 182 reports through the Central Pacific Railway Company; 344 marine reports through the co-operation of the Hydrographic Office, Navy Department; marine reports through the "New York Herald Weather Ser-

vice;" monthly reports from the local weather services of Alabama, Arkansas, Colorado, Illinois, Indiana, Iowa Weather and Crop Service, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New England, New Jersey, New York, North Carolina, North and South Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, and Wisconsin, and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

### 0 CHARACTERISTICS OF THE WEATHER FOR APRIL, 1891.

The month was warmer than usual, except along the Pacific coast, and from the middle Pacific coast east-southeast over Florida. At Boston and Newburyport, Mass., in the Red River of the North Valley, and at Wellington, Kans., the mean temperature was the highest, and at Key West, Fla., and Grand Coteau, La., it was the lowest ever reported for April. The highest temperature reported by a regular station of the Signal Service was 102°, at Yuma, Ariz., and by a voluntary observer, 112°, at *Volcano Springs, Cal.* At stations in the Ohio Valley and Tennessee, the Lake region, the Missouri and Red River of the North valleys, and at Fort Stanton, N. Mex., and Port Angeles, Wash., the maximum temperature was as high or higher than previously reported for April. The lowest temperature reported by a regular station of the Signal Service was 6°, at Saint Vincent, Minn., Fort Washakie, Wyo., and Denver, Colo., and by a voluntary observer, -35°, at Breckenridge, Colo. At Charlotte, N. C., Jacksonville, Key West, and Pensacola, Fla., Mobile, Ala., Palestine, Tex., Fort Smith, Ark., Montrose, Colo., San Francisco, Cal., and Port Angeles, Wash., the minimum temperature was as low or lower than previously reported for April. Over the Florida Peninsula the coldest weather ever known for the season prevailed on the 7th. Killing frost injured fruit and tender vegetation in the Gulf and south Atlantic states, and in Florida as far south as Lee county and Jupiter Inlet, from the 3d to 7th. Killing frost occurred in east Maryland on the 21st and on the New Jersey coast on the 26th.

The precipitation was generally deficient east of the Mississippi River and south of the Lake region, over the Rocky Mountain and plateau regions, and on the Pacific coast, except in west Washington and at San Francisco, Cal.; elsewhere the precipitation was generally in excess of the April average. The greatest excess in precipitation occurred in extreme northwest Washington, where it exceeded 4.00 inches, and the most marked deficiency was noted at Hatteras, N. C., where it was 4.20 inches, and from the lower Ohio valley southward to the middle Gulf coast, where it was more than 2.00 inches. At stations on the Washington coast and at Palestine, Tex., and Lawrence, Kans., the monthly precipitation was the heaviest, and at Wellsborough, Pa., Cleveland, Ohio, Nashville, Tenn.,

New Orleans and Grand Coteau, La., Fort Stanton, N. Mex., El Paso, Tex., and Keeler, Cal., it was the least ever reported for April. Monthly snowfall to exceed 10.0 inches was reported in the interior of New England, northeast and southeast New York, at mountain stations in south-central Pennsylvania and extreme west Virginia, in the mountains of Colorado, in central and west-central Nevada, along the line of the Central Pacific Railway crossing the summit of the Sierra Nevada Mountains in California, and at Marquette, Mich.

The severest general storm of the month prevailed along the middle Atlantic and New England coasts on the 2d and 3d, causing damage to shipping and seaside property. Destructive local storms were reported as follows: 8th, at Garza, Tex., buildings damaged to the extent of about \$500; near Columbia, Mo., a man was killed by lightning. 9th, damage by hail at Springfield, Mo.; buildings struck by lightning at Mounticello, Ill., and Milwaukee, Wis. 11th, in York Co., Pa., and Carroll Co., Md. 12th, damage in Cooke and Grayson counties, Tex., by hail, wind, and rain. 15th, tornado passed over Hansford, Tex., killing 2 persons and damaging property to the value of about \$25,000; 2 persons were also reported killed at Claude, Tex. 16th, a man killed by lightning near Savannah, Ga., and a man killed by lightning near Washington, N. C. 17th, remarkably heavy rainfall at Gallinas, Tex.; a boy killed by lightning at Trenton, Mo.; a destructive wind and hail storm at Marion, Ind.; 2 barns struck by lightning at Olney, Ill.; 2 buildings struck by lightning at Tarpon Springs, Fla. 18th, a barn struck by lightning near Dyberry, Pa.; a man reported killed by lightning near Salladasburgh, Pa.; damage by lightning in Harford and Baltimore counties, Md.; 5 houses and 2 horses struck by lightning at Orange, Mass.; house and trees struck by lightning at Crossville, Tenn. 19th, stock killed by lightning near Tullahoma, Tenn. 20th, heavy wind and rain storm at Corpus Christi, Tex., 1 boy killed; severe storms in Camp Co. and at Del Rio, Tex.; damage by hail at Lawrenceburgh, Tenn. 21st, 1 man and 2 horses killed by lightning in Knox Co., Tenn. 23d, a man reported killed by lightning at Norwich, Conn. 30th, storm caused damage at Tiffin, Ohio; a man reported killed by lightning near Stockwell, Ind.

The lower Mississippi river remained above the danger-line